

**REMARKS****35 U.S.C. § 103 Rejection*****Hall et al. v. Talwar***

The Examiner rejected claims 1-4, 6-14, 16-24 and 26-30 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Publication 2002/0130807 of Hall et al. in view of Talwar (4,952,193).

Contrary to the Examiner's assertion, the Hall et al. publication ("Hall") does not teach or disclose: "*determining differences between the transmitted and received waveforms at various shift points*" as claimed in independent claims 1, 11, and 21 and their respective dependent claims. Instead, Hall describes comparing two received waveforms. The Examiner cited to paragraphs 0166 and 0171. A relevant portion of paragraph 0166 is reproduced, below:

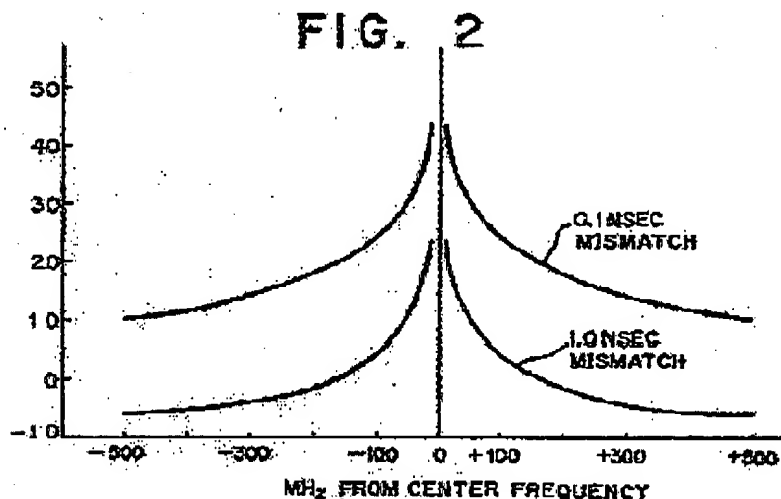
The first waveform 1502 has an initial wavefront 1503 representative of the first received impulse radio pulses of the impulse radio signal 1402. Likewise the second waveform 1504 generated after the first waveform 1502 has an initial wavefront 1506 representative of the first received impulse radio pulse of the subsequently received impulse radio signal 1402. (Emphasis added)

Thus, it is clear that Hall teaches comparing a first received waveform with a second subsequently received waveform, in contrast to the presently claimed invention which compares a transmitted waveform with a received waveform to identify data loss in a transmission system.

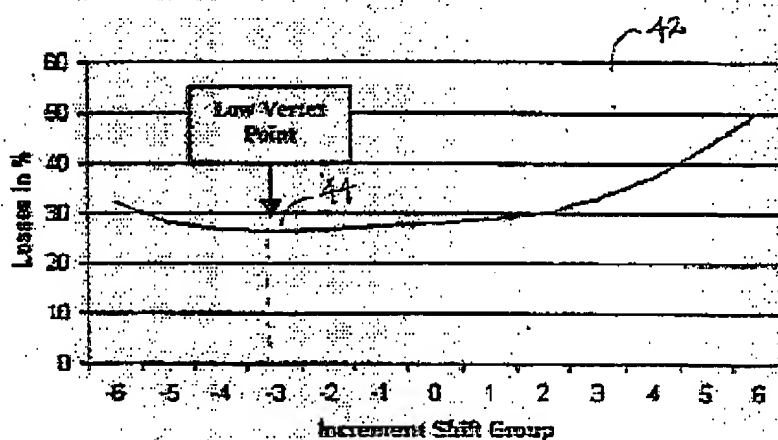
Contrary to the Examiner's assertion, Talwar does not teach "*identifying a smallest of the differences between the transmitted and the received waveforms*" as claimed in independent claims 1, 11, and 21 and their respective dependent claims. An electronic search of the text of said Talwar patent 4,952,193 as obtained from the USPTO Full-Text and Image Database was performed, and the words "identifying", "identify", "identifies", and "identified" were not found in said Talwar patent. Furthermore, the passages of Talwar cited by the Examiner, col. 6, line 65, to col. 7, line 36 do not teach or

discuss the claimed concept of "identifying". Furthermore, the Examiner has not explained or elaborated on how Talwar teaches any "identifying" as claimed.

Contrary to the Examiner's assertion, Talwar does not teach that "*the smallest of the differences comprises a low vertex point on the plot*" as claimed in claims 2, 12, and 22. In support of the rejection, the Examiner cited Fig. 2 of Talwar, a copy of which is reproduced, below:



For comparison, Fig. 5 of the present application is reproduced, below:



As can be seen in FIG. 5 of the present application, a low vertex point 44 is clearly indicated on a generated "*plot of the differences relative to the shift points*" as claimed in claims 2, 12, and 22 of the present application. In contrast, FIG. 2 of the Talwar patent is a "graph of the degree of cancellation as a function of frequency for a time mismatch of 1.0 nsec, as well as for 0.1 nsec" as described in the Talwar patent at column 1, lines 65-67. A study of FIG. 2 reveals that it apparently does not show that the smallest differences relative to the shift points between a transmitted and a received waveform comprise a "low vertex point" corresponding to the smallest of differences relative to shift points between a transmitted waveform and a received waveform as shown on the plot of the Applicant's FIG. 5 since FIG. 2 is not even a graph of differences versus shift points. In addition, the curves in FIG. 2 appear to not to contain a vertex point. The Examiner is kindly invited to indicate on the graph of FIG. 2 a point where the smallest of the differences comprises the "low vertex point" as claimed in claims 2, 12, and 22, for example as is shown in the Applicant's FIG. 5, or to otherwise withdraw the rejection.

As discussed above, the Hall publication and the patent to Talwar do not support an obviousness rejection of independent claims 1, 11, and 21. Likewise, the Hall and Talwar combination does not support an obviousness rejection of respective dependent regardless of whether or not Hall or Talwar teaches the element of the dependent claims.

Thus, in view of the above, the cited art does not teach all of the elements of the Applicant's claims. As a result the claims are non-obvious and the rejection should be withdrawn.

*Hall et al. v. Talwar and further v. Crohn*

The Examiner rejected claims 5, 15 and 25 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Publication 2002/0130807 of Hall et al. in view of Talwar (4,952,193) as applied to claims 1, 11 and 21, previously, and further in view of (4,805,096) Crohn.

As discussed above, the Hall publication and the patent to Talwar do not support an obviousness rejection of independent claims 1, 11, and 21. As a result, a combination

that further includes the patent to Crohn likewise does not support an obviousness rejection of respective dependent claims 5, 15, and 25 regardless of whether or not Crohn teaches the element of the dependent claims.

In any event, contrary to the Examiner's assertion, the patent to Crohn does not teach that "*an odd number of shift points make up a plot*" as claimed in claims 5, 15, and 25. Although Crohn teaches "An odd number of shifts by shifter 62", Crohn does not teach that the shift points "*make up a plot*", and the Examiner has not pointed to any such plot in the Crohn patent. Thus, the cited further combination of Hall, Taiwar, and Crohn does not teach all of the elements of the Applicant's claims, so the obviousness rejection should be withdrawn.

#### Conclusion


In light of the foregoing, reconsideration and allowance of the claims is hereby earnestly requested.

#### Invitation for a Telephonic Interview

The Examiner is invited to call the undersigned attorney, Kenneth J. Cool, at (408) 850-1229 if there are any issues with the present application.

Respectfully submitted,  
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